Applicant: Cyrille de Brebisson

Serial No.: 10/689,143 Filed: Oct. 20, 2003 Docket No.: 100204485-1

Title: DEFECTIVE DATA SITE INFORMATION STORAGE

#### **REMARKS**

The following remarks are made in response to the non-final Office Action mailed February 28, 2006, in which claims 1-3, 5-19, 24 and 25 were rejected, claim 4 was objected to, and claims 20-23 and 26 were allowed. With this Response, claims 1, 3, 5, 10, 14 and 24 have been amended and claims 4, 15-19, and 25 have been cancelled. Claims 1-3, 5-14, 20-24 and 26 remain pending in the application and are presented for reconsideration and allowance.

### **Claim Objections**

Claim 4 stands objected to as being dependent upon a rejected base claim, but is indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With this Response, independent claim 1 (the base claim) has been amended to include the elements of claim 4 (there were no intervening claims) and claim 4 has been cancelled. Accordingly, amended independent claim 1 is now in allowable condition, and notice to that effect is respectfully requested.

### Claim Rejections under 35 U.S.C. § 102

Claim 1-3, 5, 6, 8-11, 13, 14, and 24 are rejected under 35 U.S.C. §102(b) as being anticipated by Kulkami et al. (U.S. Patent No. 5,991,699).

With regard to independent claims 1, 5, 10 and 24, the Office Action alleges Kulkarni teaches storing defective data site information for a storage device (col. 8, lines 16-19), the method comprising: determining a first defective data site associated with the storage device (fig. 9a, step 154), determining a second defective data site associated with the storage device (fig. 9a, step 154), determining a spacing value that represents spacing between the first defective data site and the second defective data site (col. 15, lines 14-20, calculating the distance between two defects using X and Y defect position), and storing the spacing value (col. 25, line 10-15; it is a computer program for analyzing the data associated wit the defects, therefore the data is saved in order to be analyzed).

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As described above, independent claim 1 has been amended to include the subject matter of objected to claim 4 (now cancelled), and claim 1 is now in allowable condition.

Independent claims 5, 10 and 24 have each been amended to include language similar to amended independent claim 1, and now each set forth a spacing value that represents spacing between the first defective data site and the second defective data site, and storing the spacing value in or on the storage device. In particular, claim 5 now claims a storage device operably couplable to a host and having data sites for storing data, the data sites comprising defective data sites, wherein the storage device maintains defect information reportable to the host, the defect information comprising a spacing value that represents spacing between defective data sites of the storage device. Claim 10 now claims an electronic system, comprising: a host; and a storage device operably couplable to the host and having data sites for storing data, the data sites comprising defective data sites; wherein the storage device maintains defect information, the defect information comprising a spacing value that represents spacing between defective data sites of the storage device. Claim 24 now claims one or more computer-readable media having stored thereon a computer program that, when executed by a processor, causes defective data site information storage according to the following method: determining a first defective data site associated with the storage device; determining a second defective data site associated with the storage device; determining a spacing value that represents spacing between the first defective data site and the second defective data site; and storing the spacing value in or on the storage device.

Applicants respectfully submit that amended independent claims 5, 10 and 24 are allowable for at least the same reasons as objected to claim 4 (now presented as amended claim 1). Specifically, Kulkarni fails to teach or suggest a spacing value that represents spacing between the first defective data site and the second defective data site, and storing the spacing value in or on the storage device. Accordingly, withdrawal of the rejections of claim 5, 10 and 24 under 35 U.S.C. §102(b) is requested.

With regard to dependent claim 3, the Office Action alleges Kulkarni teaches the first defective data site has a first data site number and the second defective data site has a second data site number (citing col. 15, lines 25-26), further wherein determining a spacing value comprises determining a difference between the first data site number and the second data site number (citing col. 15, equation 9).

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Claim 3 has been rewritten in independent form, including all of the limitations of original claim 1 (the base claim). Applicants respectfully submit that Kulkarni fails to show each and every feature of claim 3. In particular, Applicants submit that Kulkarni makes no teaching or suggestion that the first defective data site has a first data site number and the second defective data site has a second data site number, further wherein determining a spacing value comprises determining a difference between the first data site number and the second data site number. Kulkarni teaches that the defect locations are identified using an x, y coordinate system, and that the distance between two defects can be calculated using the standard Euclidian distance calculation set forth in equation (9). The x, y coordinates of Kulkarni are not "data site numbers" as set forth in the present application, and equation (9) of Kulkarni is not a difference of data site numbers as set forth in the present application. For at least these reasons, Applicants respectfully submit Kulkarni fails to teach or suggest each and every feature of the invention as set forth in amended claim 3. Accordingly, withdrawal of the rejection of claim 3 under 35 U.S.C. §102(b) is respectfully requested.

Dependent claims 2, 6, 8, 9, 11, 13 and 14 each depend, directly or indirectly, from one of amended independent claims 1, 5, and 10, which are allowable for at least the reasons set forth above. Accordingly, claims 2, 6, 8, 9, 11, 13 and 14 are also allowable at least by reason of their dependency from an allowable claim. In addition, for the reasons set forth with respect to claim 3 above, dependent claims 6 and 11 are also not anticipated by Kulkarni because Kulkarni does not teach or suggest wherein the differences in location between defective data sites are differences in sector numbers (claim 6), or wherein defective data site numbers are associated with the defective data sites, the defect information comprising differences between defective data site numbers (claim 11). Accordingly, dependent claims 2, 6, 8, 9, 11, 13 and 14 are also in allowable condition, and withdrawal of the rejection under 35 U.S.C. §102(b) is respectfully requested.

# Claim Rejections under 35 U.S.C. § 103

Claims 7, 12, 15, 18, 19 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kulkarni (U.S. Patent No. 5,991,699), in view of Hidaka (U.S. Pub. No. 2004/0184315).

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With regard to claims 7 and 12, Kulkarni is alleged to teach the claimed invention, but is acknowledged as failing to teach the storage device is a magnetic random access memory (MRAM). Hidaka is cited as teaching a memory device made of thin film magnet. The Office Action alleges it would have been obvious to one of ordinary skill in the art to modify the work of Kulkarni because Hidaka teaches MRAM devices capable of non-volatile data storage with low power consumption.

Dependent claims 7 and 12 depend directly from independent claims 5 and 10, respectively, which are allowable for at least the reasons set forth above. Accordingly, claims 7 and 12 are also allowable at least by reason of their dependency from an allowable claim. In addition, Hidaka does not overcome the deficiencies of Kulkarni noted above regarding claims 5 and 10, in that Hidaka does not teach or suggest wherein wherein the storage device maintains defect information, and the defect information comprising a spacing value that represents spacing between defective data sites of the storage device. Accordingly, dependent claims 7 and 12 are also in allowable condition, and withdrawal of the rejection under 35 U.S.C. §103(a) is respectfully requested.

Claims 15, 18, 19 and 25 have been cancelled from the application.

Claims 16 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kulkarni (U.S. Patent No. 5,991,699), in view of Hidaka (U.S. Pub. No. 2004/0184315), and further in view of AAPA (Applicant Admitted Prior Art).

Claims 16 and 17 have been cancelled from the application.

## **Allowable Subject Matter**

The Examiner's indication that claims 20-23 and 26 are allowed is respectfully acknowledged.

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### **CONCLUSION**

In view of the above, Applicant respectfully submits that pending claims 1-3, 5-14, 20-24 and 26 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-3, 5-14, 20-24 and 26 is respectfully requested.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Response should be directed to either Matthew B. McNutt at Telephone No. (612) 767-2510, Facsimile No. (612) 573-2005, or N. Rhys Merrett at Telephone No. (972) 862-7428, Facsimile No. (972) 862-7438. In addition, all correspondence should continue to be directed to the following address:

**Hewlett-Packard Company** 

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> Respectfully submitted, Cyrille de Brebisson

By his attorneys,

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 19th day of April, 2006.

Name: Vanessa Carels